TITLE

CURL SPRING SHOE BASED WINDOW BALANCE SYSTEM

ABSTRACT

A window balance system for a tilt sash uses a pair of constant force curl springs having curled convolutions carried by sash shoes and free end regions mounted in sash shoe channels above the region of travel of the shoes. The recurl tendency of the springs imparts a lift to the curled spring convolutions, and the shoes transmit the lift to the sash. The springs recurl into the convolutions as the shoes rise and uncurl from the shoes into the shoe channels when the shoes move downward, and neither movement requires the springs to slide frictionally within the shoe channels. Each shoe is preferably formed of two identical halves that are assembled to trap the curl spring along with a cam that locks the shoe when the sash tilts.